SOL–123
(7–64)

U.S. DEPARTMENT OF LABOR

OFFICE OF THE SECRETARY

WASHINGTON

DECISION OF THE SECRETARY

This case is before the Department of Labor pursuant to a request for a wage predetermination as required by law applicable to the work described.

A study has been made of wage conditions in the locality and based on information available to the Department of Labor the wage rates and fringe payments listed are hereby determined by the Secretary of Labor as prevailing for the described classes of labor in accordance with applicable law.

This wage determination decision and any modifications thereof during the period prior to the stated expiration date shall be made a part of every contract for performance of the described work as provided by applicable law and regulations of the Secretary of Labor, and the wage rates and fringe payments contained in this decision, including modifications, shall be the minimums to be paid under any such contract by contractors and subcontractors on the work.

The contracting officer shall require that any class of laborers and mechanics which is not listed in the wage determination and which is to be employed under the contract, shall be classified or reclassified conformably to the wage determination, and a report of the action taken shall be sent by the Federal agency to the Secretary of Labor. In the event the interested parties cannot agree on the proper classification or reclassification of a particular class of laborers and mechanics to be used, the question accompanied by the recommendation of the contracting officer shall be referred to the Secretary for determination.

Before using apprentices on the job the contractor shall present to the contracting officer written evidence of registration of such employees in a program of a State apprenticeship and training agency approved and recognized by the U.S. Bureau of Apprenticeship and Training. In the absence of such a State agency, the contractor shall submit evidence of approval and registration by the U.S. Bureau of Apprenticeship and Training.

The contractor shall submit to the contracting officer written evidence of the established apprentice-journeyman ratios and wage rates in the project area, which will be the basis for establishing such ratios and rates for the project under the applicable contract provisions.

Fringe payments include medical and hospital care, compensation for injuries or illness resulting from occupational activity, unemployment benefits, life insurance, disability and sickness insurance, accident insurance (all designated as health and welfare), pensions, vacation and holiday pay, apprenticeship or other similar programs and other bona fide fringe benefits.

By direction of the Secretary of Labor,

Charles Donahue

Solicitor of Labor.

GSA WASH DC 65-3109

WAGE RATE SCHEDULE

DEPARTMENT, AGENCY, OR BUREAU: GENERAL SERVICES ADMINISTRATION - PUBLIC BUILDINGS SERVICE

DECISION NO.: AH-5,756

LOCATION OF PROJECT (City or other description): McLEAN HEADQUARTERS BUILDING

LAW INVOLVED: Davis-Bacon

STATE: VIRGINIA

COUNTY: FAIRFAX

DATE OF DECISION: 12-29-67

DESCRIPTION OF WORK: CORRECTIONS TO AIRCONDITIONING SYSTEMS
CONTRACT NO. GS-03B-15449
PROJECT NO. 450089

EXPIRES: 4-28-68

SUPERSEDES DECISION NO.:

CRAFT

Building Construction	Basic Hourly Rates	Fringe Benefits Payments				
		H & W	Pensions	Vacation	App. Tr.	Others
Asbestos workers	$5.30	.15	.15		.005	
Boilermakers-Blacksmiths	5.30	.20	.40		.01	
Boilermakers-Blacksmith's helper	5.05	.20	.40		.01	
Bricklayers	5.30	.22	.13			
Carpenters	4.60	.11	.16		.03	
Cement masons	4.775	.10	.10			
Grinding machine	4.85	.10				
Electricians	5.40	.15	15+.20		.06	
Elevator constructors	5.40	.075	.125	a + b		
Helpers	3.73	.075	.125	a + b		
Helpers, (Probationary)	2.70					
Glaziers	4.95	.12	.10			
Ironworkers:						
Structural	5.35	.25	.20		.01	
Ornamental & chain link fence	5.35	.25	.20		.01	
Reinforcing	5.30	.15	.10		.003	
Laborers:			.10			
Common laborers, Landscapers	3.325	.125	.10			
Air tool operators, Pipelayers (Concrete & Clay), Scaffold Builders, Pavement Busters, Tenders, Buggy Mobiles, Spaders, Mortarmen, Scooterettes	3.475	.125	.10			
Powersaw, Well Points, Bottom Men	3.575	.125	.10			
Powderman	4.50	.125	.10			
Plumbers laborer	3.35	.15	.10			
Plasterers' tenders	3.55	.10	.10			
Acetylene burners used on wrecking	3.825	.125	.10			
Lathers	4.87	.15	.15			
Lead burners	4.80	.07		c	.01	
Marble setters	5.30	.15	.25			
Helpers	3.675					
Helpers, 1st 30 days (inexp.)	3.175					
Millwrights	4.725	.11	.16		.03	
Painters:						
Brush, Paperhangers, Tapers, Spray	4.93	.15			.005	
Steel, Structural, sandblasters	5.26	.15			.005	
Piledrivermen	4.725	.11	.16		.03	
Plasterers	4.725	.275	.15		.05	
Plumbers	5.56	.175				
Roofers:						
Composition	3.70	.15	.15			
Slate, Tile Mopmen, Waterproofer, Sprayer, Sprandrel, Ironite	4.20	.15	.15			
Helpers	3.15	.15	.15			

WAGE RATE SCHEDULE

DEPARTMENT, AGENCY, OR BUREAU		DECISION NO.
GENERAL SERVICES ADMINISTRATION - PUBLIC BUILDINGS SERVICE		AH-5,756
LOCATION OF PROJECT *(City or other description)*		LAW INVOLVED
McLEAN	HEADQUARTERS BUILDING	Davis-Bacon
STATE	COUNTY	DATE OF DECISION
VIRGINIA	FAIRFAX	12-29-67
DESCRIPTION OF WORK		EXPIRES
CORRECTIONS TO AIRCONDITIONING SYSTEMS CONTRACT NO. GS-03B-15449 PROJECT NO. 450089		4-28-68
		SUPERSEDES DECISION NO.

CRAFT	Basic Hourly Rates	Fringe Benefits Payments				
		H & W	Pensions	Vacation	App. Tr.	Others
Building Construction						
Sheet Metal Workers	$5.31	.21	.21		.025	
Soft Floor Layers	4.60	.11	.16		.03	
Sprinkler Fitters	5.00	.11	.15		.04	
Steamfitters, Refrigeration & Air Condition Mechanic	5.56	.175				
Stone Masons	5.30	.15	.25			
Stone Carvers	5.455					
Stone Fitters, Trimmers & Cutters	5.40					
Terrazzo & Mosaic Workers	4.475	d	.20			
Helpers	3.60	d	.20			
Tile Setters	4.475	d	.20			
Helpers	3.60	d	.20			
TRUCK DRIVERS:						
Dump, up to & including 8 wheels, Water Sprinkler, Grease & Oil	2.95	.12	e			
Dump, over 8 wheels, Flat Trucks, Pickups, Tractor Pulls, Trailer Trucks, Dumps (open tail gate)	3.05	.12	e			
Euclids, Dumpsters, Euclid Water Sprinklers, Carry-alls	3.35	.12	e			
Concrete Mixer Drivers	3.10	.12	.15	a		
Helper	2.65	.12				
LINE CONSTRUCTION:						
Linemen, Cable Splicers, Equipment operators	5.66	.15	1%		1/4%	
Truck with winch, Truck Pole or Steel Handling	4.66	.15	1%		1/4%	
Groundmen (0 to 1 year)	3.19	.15	1%		1/4%	
Groundmen (1 to 2 years)	4.10	.15	1%		1/4%	
Groundmen (over 2 years)	4.35	.15	1%		1/4%	
Riggers & Welders - receive rates prescribed for crafts performing operations to which rigging and welding are incidental.						

Paid Holidays
A-New Year's Day; B-Memorial Day; C-Independence Day; D-Labor Day; E-Thanksgiving Day; F-Christmas Day.

Footnotes
a - Holidays A through F.

b - Employer contributes 4% basic hourly rate for 5 years or more of service or 2% of basic hourly rate for 6 months to 5 years of service as Vacation Pay Credit.

c - Holidays A through F Plus.
Washington's Birthday and Good Friday (providing employee has worked at least 45 full days during the 120 calendar days prior to the holiday, and the regular scheduled workdays immediately preceding and following the holiday).

d - Employer contributes 23.70 per man per month.

e - Employer contributes $2.00 per week when employee has worked 90 days and works 3 days in any work week.

WAGE RATE SCHEDULE

DEPARTMENT, AGENCY, OR BUREAU: GENERAL SERVICES ADMINISTRATION - PUBLIC BUILDINGS SERVICE	DECISION NO.: AH-5,756
LOCATION OF PROJECT (City or other description): McLEAN HEADQUARTERS BUILDING	LAW INVOLVED: Davis-Bacon
STATE: VIRGINIA / COUNTY: FAIRFAX	DATE OF DECISION: 12-29-67
DESCRIPTION OF WORK: CORRECTIONS TO AIRCONDITIONING SYSTEMS CONTRACT NO. GS-03B-15449 PROJECT NO. 450089	EXPIRES: 4-28-68 SUPERSEDES DECISION NO.:

CRAFT	Basic Hourly Rates	Fringe Benefits Payments				
		H & W	Pensions	Vacation	App. Tr.	Others
Building Construction						
POWER EQUIPMENT OPERATORS:						
35 ton cranes and above, Tower and Climbing cranes	$5.035	.20	.20		.01	
Backhoes, boom cats, cableways, cranes or derricks, draglines, elevating graders, hoists, elevator (permanent), paving mixers, piledriving engines, power shovels, tunnel shovels, mucking machines, batch plants, concrete pumps locomotives (standard narrow gauge), power driven wheel scoops and scrapers 50 cu. yds. struck capacity or above	4.885	.20	.20		.01	
Hydrocrane 12 ton or under	4.835	.20	.20		.01	
Hydraulic back hoes under 1/2 yd., mounted on tractors	4.735	.20	.20		.01	
Front end loader (over 3 1/2 c.y.)	4.785	.20	.20		.01	
Front end loader (over 2 3/4 c.y. to & including 3 1/2 c.y.)	4.635	.20	.20		.01	
Front end loaders (hi-lift), fork lifts	4.485	.20	.20		.01	
Air compressors (on steel)	4.555	.20	.20		.01	
Air compressors (except on steel), concrete mixers, mechanics and maintenance men, pumps, tunnel mechanics, tunnel motorman, welding machines, well points	4.305	.20	.20		.01	
Power driven wheel scoops and scrapers under 50 cu. yds. struck capacity, blade graders, bulldozers, motor graders	4.285	.20	.20		.01	
Rollers, asphalt spreaders, bull float finishing machines, concrete finishing machines, concrete spreaders, fine-graders, form graders, concrete saws	4.085	.20	.20		.01	
Apprentice engineers:						
Firemen	3.565	.20	.20		.05	
Truck crane oilers	3.445	.20	.20		.05	
Oilers	3.395	.20	.20		.05	
Boilers, (skeleton) trenching machines, tug boats, well drilling machines	4.475	.20	.20		.01	

SECTION 4

MECHANICAL AND ELECTRICAL EQUIPMENT

GENERAL REQUIREMENTS

4-01 APPLICABILITY

a. This section applies to and forms a part of each of the sections entitled Airconditioning-Air Handling Apparatus, Airconditioning-Chilled Water Systems, Airconditioning-Temperature Control Systems.

b. This section, and each of the sections to which it applies, is subject to the requirements of the "General Provisions", "General Conditions" and "Special Conditions" sections of this specification.

4-02 KIND AND QUALITY OF MATERIAL

a. Appliances, fixtures, etc., furnished shall be in accordance with the specification requirements in each case, and shall be new, of the best quality and grade and current models for which replacement parts are available, unless otherwise specified specifically.

4-03 APPROVAL OF MECHANICAL AND ELECTRICAL MATERIAL

a. Within 30 days after the receipt of notice to proceed, the Contractor shall submit to the Contracting Officer a complete catalog data for each item in the "Material Schedule", except as indicated below. Catalog data shall include catalog numbers, trade names, performance data and descriptive material. Catalog data will not be required where the same information is to be furnished on shop drawings required by sub-paragraph below.

b. In addition to catalog data, the Contractor shall submit to the Contracting Officer shop drawings for each item identified by an asterisk (*) in the Material Schedule.

c. Catalog data and shop drawings shall be coordinated and included in a single submission. Later submission of shop drawings will not be considered except where a single submission is impracticable because of a standard trade practice that requires later submissions. Where any shop drawings are to be submitted later, a list of the items involved must be included with the catalog data. Partial submissions not in accordance with the above will be returned without action.

d. Catalog data and shop drawings shall be identified as required by the "General Conditions" section of this specification, and in addition, each shall be identified by the name of the item and the applicable specification paragraph number (or contract drawing number).

MATERIAL SCHEDULE

Item	Name of Manufacturer	Catalog No. or Trade Name	Shop Drawings Required (*)
Sound Lining Material			
Instrument Test Holes			
Constant Volume Regulators			
Orifice Plates			
Air Valves			
Mixing Boxes			
Cooling Coils			
Temperature Control Systems			*

e. None of the items listed in the above Material Schedule shall be purchased, delivered to the site, or installed, until the item has been approved. After the Material List has been approved, no substitution will be permitted except where such substitution is considered by the Contracting Officer to be in the best interest of the Government or is due to circumstances beyond the control of the Contractor.

f. Should the Contractor fail to comply with any of the requirements of the preceding subparagraphs, i.e. --

(1) Fail to submit items in accordance with the above schedule to the Engineer, or the Public Buildings Service, for approval within 30 days after the date of receipt of notice to proceed;

(2) Fail to name items in accordance with specification requirements and of the best quality and grade;

then the right is reserved by the Contracting Officer to select any or all items in the above Material Schedule which selection shall be final and binding upon the Contractor. The materials selected or approved, as the case may be, by the Contracting Officer shall be used in the work at no additional cost to the Government.

g. Attention is called to the fact that all mechanical and electrical items submitted for approval pursuant to this section shall be substantially the same as items of the same manufacture which, on the date of opening of bids, have been in successful commercial use and operation for not less than one year in projects and units of comparable size. The right is reserved by

the Contracting Officer to require Contractor to submit a list of buildings where they are in operation so that usch investigation as may be deemed necessary may be made before approval.

4-04 TESTS

a. Prior approval shall be obtained from the Construction Engineer and coordinated with the Building Manager.

b. The Contractor shall test the equipment inst-lled under this specification and demonstrate its proper operation to the Government Representative.

c. No equipment shall be tested, or operated for any other purpose, such as checking motor rotation, until it has been fully lubricated and aligned in accordance with the manufacturer's instructions.

4-05 INSTALLATION OF EQUIPMENT

a. All appliances, equipment and associated appurtenances, including relocated items and apparatus, shall be installed and connected in accordance with the best engineering practice and in accordance with manufacturer's instructions and recommendations. Auxiliary piping, water seals, valves, electrical connections, etc., recommended by the manufacturer or required for proper operation shall be furnished and installed complete.

4-06 COORDINATION

a. The Contractor shall coordinate the work of the different trades in order than interferences between new and present mechanical, electrical, architectural and structural work will be avoided. Pipes, conduits, ducts, etc., shall be kept as close as possible to ceilings, walls, columns, etc., in order to take up a minimum amount of space. Pipes, conduits, ducts, equipments, etc., shall be located so that they will not interfere with the intended use of cranes, trolley beams, monorails, eyebolts and other lifting equipment. Crane rails, trolley beams, monorails, etc., shall not be used for the attachment or support of any piping, conduit, ductwork or other equipment.

b. All offsets, fitting,etc., necessary in order to accomplish the requirements of the foregoing sub-paragraph shall be furnished and installed without additional expense to the Government. In case interference develops the Government Representative will decide which equipment shall be relocated, regardless of which equipment was installed first.

4-07 SINGULAR NUMBER

a. Where any device or part of equipment is herein referred to in the singular number (such as "the motor"), such reference shall be deemed to apply to as many such devices as are required to complete the installation as shown on the drawings.

4-08 PIPING, CONDUITS AND SUPPORTS, GENERALLY

a. New piping and conduits, shall be run parallel with the lines of the building unless otherwise shown or noted on drawings. Electrical conduits shall not be hung on hangers with any other service, and so far as possible, shall be hung above all other service pipes. The different service pipes, valves, fittings, etc., shall be installed so that after the covering is applied there will be not less than 1/2-inch clear space between the finish covering and other work and between the finished covering of parallel adjacent pipes. Hangers on different service lines running parallel with each other and near together shall be in line with each other and parallel to the lines of the building. Exact location of piping, ducts, etc., shall be coordinated between Subcontractors so that there will be no interferences between piping, ducts, etc.

b. Hangers shall be spaced so as to prevent sag and permit proper drainage and shall not be spaced more than 10 feet apart unless a greater spacing is definitely indicated on drawings. A hanger shall be placed within one foot of each horizontal elbow.

c. Unless otherwise specified, hangers and hanger supports shall be in accordance with Standard Details 10-1-1A, 10-1-2A and 10-1-3A.

d. Wire or perforated strapping shall not be used for hanging pipe.

e. Expansion bolts (shields) used for securing hangers in existing work shall be in accordance with Federal Specification FF-S-325, Group II, Type 2, or Group III. Expanders and shields shall be steel or malleable iron. Sizes of shields and bolts shall be such that the proof test load will be no less than four times the maximum safe load indicated for the hanger rods in Table III, Federal Specification WW-H-171c.

f. Welded attachments, for securing hangers to piping or to structural steel, may be provided in lieu of other attachments specified. Welded attachments shall be designed so that the fiber stress at any point in the weld or attachment will not exceed the fiber stress in the hanger rod.

4-09 UNIONS

a. No union shall be placed in a location which will be inaccessible after completion of the work. A union shall be installed on each side of each new and relocated control valve, regulator, etc.; on one side of each check valve; and at all pieces of new equipment such as compressors, tanks, etc.; in order that such equipment may be readily disconnected. Where flanged valves, regulators, etc., do not permit the removal of flange bolts, two such devices must be separated by a spool.

4-10 ACCESS PANELS

a. Furnish and locate access panels in present plaster ceilings for access to concealed valves, regulators, unions, dampers, air valves, mixing boxes, motors, etc., installed and/or modified in connection with this work. Generally, the present ceilings in the First Floor are plaster. Other ceilings throughout the building are removable ceiling tile panels.

b. Panels generally shall not be less than 12 inches by 16 inches in size, except that larger panels shall be furnished where required, and panels in patterned ceilings shall have dimensions corresponding to the pattern module.

c. Access panels shall be flush type and of all steel construction with a No. 16 gage wall or ceiling frame for masonry or plaster and a No. 14 gage panel door. Doors shall be secured with concealed hinges and flush locks of either the cylinder type or approved, positive acting, screwdriver operated type, except doors for wall panels may be secured with suitable clips and countersunk screws. Panels shall be painted with a rust inhibitive primer at the factory. Installation, including necessary cutting for openings and patching, is included.

4-11 ACCESS PANEL IDENTIFICATION

a. Access panel identification shall be provided on all new and existing access panels installed and/or opened in connection with this work. Identification shall also be applied to removable ceiling tile panels opened in connection with this work.

b. Identification buttons of "pastel" colored metal or plastic shall be secured to each access panel, removable tile section, etc. to identify appliance, equipment and apparatus location. Identification buttons shall be not less than 3/4-inch diameter and not larger than 1-inch, and shall be in varied colors to identify each of the following:

Volume dampers in main and branch ducts

Mixing boxes

Air Valves

Thermostats, pneumatic motors, etc.

Access doors in ducts

Buttons shall be secured with not less than one screw. Color coding of buttons shall be coordinated with the Building Manager and shall be approved by the Construction Engineer.

4-12 PAINTING

a. Touch-up painting and equipment identification, are included in this section of the specification. The Contractor shall coordinate the work of all trades affected.

b. Where factory finishes are provided on equipment and no additional field painting is specified, all marred or damaged surfaces shall be touched up or refinished so as to leave a smooth, uniform finish at the time of final inspection as directed by the Government Representative.

4-13 FOUNDATION

a. Modifications shall match present foundations and conform to Standard Detail 10-1-5b.

4-14 STANDARD DETAILS

a. The details referred to by numbers on the mechanical and electrical drawings, in the Standard Specifications or in this specification are Standard Details of the Public Buildings Service and form a part of the contract.

4-15 CORROSION RESISTING METAL'

a. Where corrosion resisting metal is referred to in the specification, it shall be either nickel copper alloy or corrosion-resisting steel alloy. Unless otherwise specified, nickel copper alloy shall comply with Federal Specification QQ-N-281a and corrosion-resisting steel shall comply with Federal Specification QQ-S-766c, and may be either Class 1 (AISI No. 304), Class 5 (AISI No. 316), or Class 6 (AISI Nos. 321 or 347). Corrosion resisting steel of all classes shall be furnished in condition A (annealed). All welds in corrosion-resisting steel (except Class 1) shall be properly annealed to prevent corrosion.

4-16 THERMAL INSULATION

a. Insulation required to insulate new work and to patch existing work disturbed or damaged during construction shall match adjacent existing material and workmanship.

* * * * *

SECTION 5

AIRCONDITIONING

AIR HANDLING APPARATUS

5-01 WORK INCLUDED

a. This section of the specification includes the furnishing of all materials, equipment, appliances, fixtures, labor, services and associated appurtenances to perform complete the alterations, modifications, additions and air balancing of the present air handling apparatus for the Main Building as described herein and indicated on the drawings, and is subject to the requirements of the "Mechanical and Electrical Equipment, General Requirements" section of the specification.

b. The extent of work to be performed by the Contractor shall be basically, but not limited to, the following:

(1) Install pressure differential orifices for constant volume controllers on new and existing air valves and mixing boxes in double-duct air supply systems. (See drawings 27-211 and 27-266, work items 2 and 3).

(2) Provide two new air mixing boxes and two new air valves for double-duct air supply systems. (See drawings 27-214 and 27-265, work items 16 and 17).

(3) Perform air balancing and adjustments to each new air valve and mixing box.

(4) Cutting and patching for new work.

(5) Painting.

(6) All electrical work as required to accomplish project intent.

5-02 STANDARD SPECIFICATION

a. Unless otherwise indicated, references in this section of the specification to paragraphs mean paragraphs in the Standard Air-conditioning Specification, General Services Administration, Public Buildings Service, dated December 1964, and such paragraphs, as well as paragraphs 1 to 6, inclusive, form a part of this specification.

5-03 SHEET METAL ORIFICE PLATES

a. The Contractor shall furnish and install sheet metal orifice plates for the new and existing air valves and mixing boxes in the "double-duct" air systems. (See drawings 27-211 and 27-266, work items 2 and 3.)

b. The orifice areas of the sheet metal plates, required to effect differential pressure control, shall be coordinated with the manufacturer of the present air valves and mixing boxes, Anemostat Corp. of America, and the control manufacturer of the differential pressure regulators specified hereinafter under "Airconditioning-Temperature Control Systems". When the required orifice area to duct area ratio is 70 percent or higher, a single orifice opening may be utilized. Where this ratio is less than 70 percent, a multiplicity of evenly spaced holes shall be formed in the plates. A complete listing shall be submitted for approval.

c. Metal orifice plates shall be constructed of No. 22 U.S.S. gage zinc-coated steel, with 1-1/2 inch flanged edges. Orifice plates shall be secured in present ductwork with duct sealer and sheet metal screws on 18-inch centers.

5-04 ACCESS DOORS

a. See paragraphs 125 to 128, inclusive.

b. Provide an access door at each orifice plate, sized and located to provide access to differential probes.

5-05 DUCT SUPPORTS

a. See paragraphs 129 to 135, inclusive.

b. Supports shall be constructed of the same material as the ducts they support.

5-06 DUCTWORK SOUND LINING

a. Sound absorbers generally: See paragraphs 171 to 176, inclusive.

b. The Contractor shall install sound lining in sections of ductwork as indicated on the drawings.

5-07 AIR MIXING BOXES

a. See paragraphs 180 to 188, inclusive.

b. Mixing boxes shall be similar to present mixing boxes with constant volume control.

c. Air mixing boxes shall be directly fastened to or suspended from the building structure. Hangers shall be cross braced to insure that boxes will be stationary when in operation.

5-08 AIR VALVES

a. Air valves shall be identical to valves supplied as part of mixing boxes specified above and shall be complete with pugmatic motors and controllers.

5-09 INSTRUMENT TEST HOLES

a. See paragraph 163.

b. Existing thermal insulation and finish shall be neatly cut so as to accommodate the installation of the instrument test hole fittings.

5-10 ADJUSTMENTS

a. After completion of the work as specified and indicated on the drawings, all new altered or modified mixing boxes and air valves, and associated appurtenances shall be adjusted so that it will perform as specified, as indicated on the drawings or as directed by the Government Representative.

b. Each present and new mixing box and air valve shall be adjusted and balanced so that the air quantities at inlets and outlets are as specified or shown on the drawings.

c. The five (5) "double-duct" systems serving the mixing boxes and air valves, shall be adjusted as many times as is required to achieve the design room terminal air quantities.

d. Direct reading velocity or pressure meters and instruments may be used for adjustment of the mixing boxes and air valves in induction unit room terminals, in accordance with manufacturer's recommendations.

e. Settings of dampers, splitters and other volume adjusting devices shall be permanently marked so that they can be restored if disturbed at any time.

f. Test instruments required for the adjustments shall have been calibrated within a period of six months prior to this work.

g. All labor, instruments and appliances required for adjustments and tests shall be furnished by the Contractor.

5-11 CUTTING, REMOVAL, ETC.

a. The Contractor shall perform all cutting of existing work, including walls, floors and access openings.

b. Present electrical connections, motors, motor starters, wiring, devices and similar equipment shall be removed as required.

c. The Contractor shall remove and reinstall present removable ceiling panels with care in areas where new work is being performed. The Contractor shall be responsible for replacing with new and like panels any that are damaged, soiled, etc.

d. Unusable material, debris, etc., resulting from this work shall not be allowed to accumulate and shall be removed daily or as directed.

5-12 RESTORATION

a. Existing work which is cut, drilled, altered, removed or temporarily removed and replaced shall be repaired and restored to match similar existing work to which it joins. No ragged unfinished surfaces shall remain in the completed work.

5-13 REPAIRS

a. Any damage to present floors, walls, equipment, ceilings, furnishings, etc., due to the Contractor's negligence, shall be restored to match existing work.

5-14 ELECTRICAL MODIFICATIONS

a. The Contractor shall furnish and install all wiring required for the extension of, reconnection of, or modification to the existing control and interlock wiring systems, affected by the work of this contract..

5-15 CLEANING

a. See paragraphs 569 to 571, inclusive.

5-16 PAINTING

a. All portions of ducts, etc., installed or modified under this contract, which are not covered or concealed by furrings, suspended ceilings, etc., shall be painted. All surfaces to be painted shall be clean, dry and free from oil or grease before paint is applied. All abrasions or other damage to factory or shop painting or priming coats shall be touched up before field coats are applied.

b. Colors of finish coats of lead and oil paint and machinery enamel shall match present colors in building.

c. Nameplates and plated or polished surfaces shall not be painted.

* * * * *

SECTION 6

AIRCONDITIONING - CHILLED WATER SYSTEMS

6-01 WORK INCLUDED

a. This section of the specification includes the furnishing of all materials, equipment, appliances, fixtures, labor, services and associated appurtenances to perform complete the alterations to the present primary chilled water system for the Main Building as described herein and indicated on the drawings, and is subject to the requirements of the "Mechanical and Electrical Equipment, General Requirements" section of the specification.

b. The extent of work to be performed by the Contractor shall be basically, but not limited to, the following:

(1) Install valved flushing and cleaning connections to new and existing cooling coil headers at each air handling apparatus.

(2) Install new water cooling coil in air handling apparatus AC-31.

(3) Flushing and cleaning of existing water cooling coils in air handling apparatus.

6-02 STANDARD SPECIFICATION

a. Unless otherwise indicated, references in this section of the specification to paragraphs mean paragraphs in the Standard Airconditioning Specification, General Services Administration, Public Buildings Service, dated December 1964, and such paragraphs, as well as paragraphs 1 to 6 inclusive, form a part of this specification.

6-03 CHILLED WATER PIPING AND FITTINGS

a. See paragraphs 392 to 412, inclusive, except paragraph 393.

6-04 WATER VALVES

a. See paragraphs 413 to 416 inclusive.

6-05 PIPING INSTALLATION

a. See paragraphs Nos. 435 to 438, inclusive.

6-06 WATER COOLING COILS

a. See paragraphs 29 to 36 inclusive, except paragraph 35 and as specified otherwise herein.

b. The present six coil sections in air handling apparatus AC-31 shall be removed from the project and replaced with new water cooling coils as herein specified. Dimensions of new cooling coils shall be similar to present, with six (6) sections, 7 feet 6 inches long, with a total face area of not less than 93.0 square feet. Coil capacity shall be as follows:

COIL NO. CC-31

Air Capacity c.f.m. at 70 degrees F. - 42,000
Entering 82.3 deg. F.D.B. and 67.4 deg. F.W.B.
Leaving 52.0 deg. F.D.B.and 51.3 deg. F.W.B.
Water Quantity 330 G.P.M. of water entering at 45.0 deg. F.

c. The foregoing capacity shall be developed with a maximum fin spacing of 8 per inch, air friction (wet coil) not exceeding 0.70 inches W.G. and water head loss not exceeding 26.0 feet.

6-07. CLEANING PRESENT COOLING COILS

a. The Contractor shall perform complete the flushing and chemical cleaning of the present cooling coils in the air handling apparatus, to remove scale deposits, sludge etc. The present coils are comprised of copper tubing, with external aluminum fins.

b. Each coil section shall be flushed with clean -ater, prior to the chemical cleaning. Suitable pressure hoses shall be connected from present building water supply lines to the new flushing connections on the coil headers and to drain trenches. Each coil section shall be flushed, with all remaining coils in the coil bank closed-off by means of the present lubricated plug valves on each section. Treated water from the primary chilled water system shall not be utilized for this flushing operation.

c. After flushing, each coil bank in the air handling apparatus shall be chemically cleaned by circulating suitable chemical solvents, with inhibitors, for a period of not less than six hours. After which, the chemical solution shall be drained and the coil flushed again with treated water from the primary chilled water system. Submit for approval, the chemical mixture by weight or volume proposed for the chemical cleaning.

6-08 CLEANING

a. See paragraphs Nos. 569 to 571, inclusive.

6-09 ADJUSTMENTS

a. See paragraphs Nos. 572, 574 and 575.

6-10 TESTS

a. See applicable paragraphs Nos. 581 to 595, inclusive.

6-11 PAINTING

a. All disturbed and restored surfaces of casings, portions of pipes, etc., shall be painted to match present adjacent joining surfaces.

* * * * *

SECTION 7

AIRCONDITIONING

TEMPERATURE CONTROL SYSTEMS

7-01 WORK INCLUDED

a. This section of the specification includes the furnishing of all materials, equipment, appliances, fixtures, piping, wiring, services and associated appurtenances to perform complete the alterations, modifications, additions and adjustments to the existing temperature control system for the Main Building as described herein and indicated on the drawings, and is subject to the requirements of the "Mechanical and Electrical Equipment, General Requirements" section of the specification.

b. The extent of work to be performed by the Contractor shall be basically, but not limited to, the following:

(1) Install return air zone thermostats for resetting supply air controllers for steam reheat coils in air handling apparatus serving interior building areas. Each return air zone thermostat to be provided with remote temperature indication and reset on existing control panels in Equipment Rooms. (See Drawings 27-265 and 27-266, work item 18).

(2) Provide chilled water control valves on chilled water lines to the four air handling units serving "perimeter" building areas.

(3) Provide constant volume regulators, probes, connecting tubing, etc. to effect constant volume control in existing air valves on the "double-duct" air distribution systems. (See Drawings 27-211 and 27-266, work Items 2 and 3)

(4) Provide constant volume regulators, probes damper motors, connecting tubing, etc. to effect constant volume control of existing mixing boxes on the "double-duct" air distribution systems. (See Drawings 27-211 and 27-266, work Items 2 and 3.

(5) Provide constant volume controls, damper operators, etc. for new air valves and mixing boxes specified under "Air-conditioning-Air Handling Apparatus" section of the specification. (See Drawings 27-211 and 27-266, work Items 2 and 3)

(6) Disconnect the existing static pressure controls for the hot deck and cold deck face dampers in the "double-duct" air handling apparatus. (See Drawings 27-211 and 27-266, work Items 2 and 3)

(7) Damper linkage adjustments as required for air balancing.

(8) Installation of all pneumatic tubing and accessories as required to perform complete the work outlined herein.

(9) Installation of all 60-volt and less electric wiring, boxes, devices, raceways, etc. as required to perform complete the work outlined herein.

(10) All services as required to reset existing controls and calibrate, adjust and test all new controls and existing components affected by this work, to form fully integrated automatic control systems.

7-02 STANDARD SPECIFICATION

a. Unless otherwise indicated, references in this section of the specification to paragraphs mean paragraphs in the Standard Airconditioning Specification, General Services Administration, Public Buildings Service, dated December 1964, and such paragraphs, as well as paragraphs 1 to 5, inclusive, form a part of this specification.

7-03 EXISTING TEMPERATURE CONTROL SYSTEMS

a. The Contractor shall submit evidence and certification as may be required by the Contracting Officer, to reasonable prove that new controls and all associated appurtenances to be provided under this contract are compatible and in every respect with those existing in the building. All new controls and accessories shall have the same operating pressure ranges, electric bridges and operating characteristics as the existing temperature control systems.

7-04 AUTOMATIC TEMPERATURE CONTROL

a. Temperature control system, generally: see paragraphs 468 to 470, inclusive, except new controls shall be compatible in all respects with the existing systems and shall perform all functions indicated on the drawings and in the required range sequence.

b. Damper operators: See paragraph 480. This Contractor shall furnish and install and relocate damper operators as required, including mixing damper operators for the existing and new mixing boxes, air valves, etc., specified under "Airconditioning-Air Handling Apparatus" section of the specification.

c. This contractor shall furnish and install the automatic volume controls required for the new and existing air valves, mixing boxes, etc. The controls shall operate on differential pressure created by an orifice, and shall be complete with high and low sensing tubes, regulators, connections, etc. The volume resetting devices with calibrated cfm dials, shall be readily accessible on outside of boxes.

d. Duct thermostats: See paragraphs 487 and 488. This Contractor shall relocate all controllers and sensing elements as required for stable and representative temperature sensing of control points, without

excessive hunting, etc. Where required for stable support, zinc-coated angle iron frames shall be provided in apparatus casings, ducts and other locations.

e. Thermometers: See paragraphs 490 to 492, inclusive.

f. Static pressure and velocity controllers: See paragraphs 493, 494, 548 and 549.

g. Controllers generally: See applicable paragraphs 496 to 498, inclusive.

h. Automatic Valves: See paragraphs 477 and 479. This Contractor shall furnish and install one two-position chilled water valve to each of the four High-Pressure Air Handling Units serving the perimeter systems. Two valves shall be sized for 300 gpm, one for 180 gpm and one for 125 gpm.

7-05 EXISTING CONTROL PANELS

a. The following additions to the existing Control Panels are required:

(1) Temperature indication for each new return air zone thermostat installed for the interior building areas and the four existing thermostats in the cafeteria.

(2) Remote temperature adjustors for new return air zone thermostat and the four existing thermostats in the cafeteria.

b. These instruments shall be located and arranged on the Panels so as to effect desirable grouping for systems controlled and to leave the maximum area possible for future installation of additional controls. Shop drawings are required and shall be submitted and approved prior to this work.

c. Each new electric wire and pneumatic tube shall be labeled at each end to show location of the opposite end.

d. Each new point of all terminal strips in central and unit panels shall be permanently labeled to show instrument or point served.

7-06 DEMONSTRATION

a. See paragraph 534.

7-07 OPERATING INSTRUCTIONS

a. See paragraph 535.

7-08 TEMPERATURE CONTROL DIAGRAMS

a. See paragraphs 536 to 539, inclusive.

7-09 PNEUMATIC CONTROL SYSTEMS

a. See paragraphs 540 to 554, inclusive, except that compressed air supplies shall be taken from the existing main air supplies. Extreme care shall be exercised during the pneumatic air pipings installation to insure that all lines are clean and free of dirt, moisture, etc.

7-10 ELECTRICAL AND ELECTRONIC CONTROL SYSTEMS

a. See paragraphs 555 to 568, inclusive.

7-11 CLEANING

a. See applicable portions of paragraphs 569 to 571, inclusive.

7-12 ADJUSTMENTS

a. See applicable portions of paragraphs 572 to 579, inclusive.

7-13 TESTS

a. See applicable portion of paragraphs 580 to 595, inclusive.

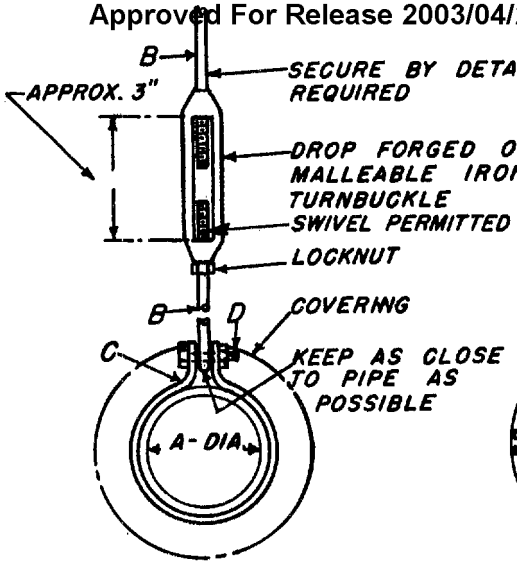
7-14 PAINTING

a. All portions of new and/or disturbed pipes, conduits, etc., which are not covered or concealed by furrings, suspended ceiling, etc., shall be painted to match existing adjacent surfaces. All surfaces to be painted shall be clean, dry and free from oil or grease before paint is applied. All abrasions or other damage to factory or shop painting or priming coats shall be touched up before field coats are applied.

b. Nameplates and plated or polished surfaces shall not be painted.

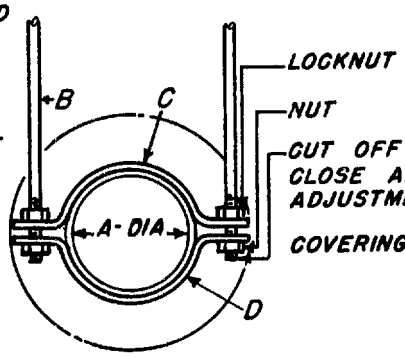
END OF SPECIFICATION

R.S.H. 6-26-51 | "AS" | T.C.C. 6-21-51 | "AE" | C.A.P. 6-18-51 | "DS" | H.M.Z. 6/12/51 | "SP" | "S" | J.O.M. 6/21/51 | "ME"



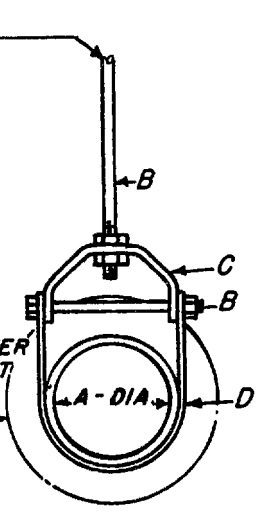
HANGERS NO. 1 & 2

HANGER NO. 1: FOR ALL PIPE CARRYING STEAM OVER 15 POUNDS PRESSURE
HANGER NO. 2: FOR ALL LOW PRESSURE STEAM, RETURN, WATER, AIR, GAS, SOIL, WASTE, VENT PIPES, ETC., EXCEPT WHERE HANGER NO. 3 IS REQUIRED.



HANGER NO. 3

FOR USE WHERE SPACE WILL NOT PERMIT INSTALLATION OF HANGERS NO. 1, 2, & 4.



HANGER NO. 4

FOR ALL STEAM, RETURN, WATER, AIR, GAS, WASTE, VENT PIPE, ETC., AND FOR ELECTRIC CONDUITS, EXCEPT WHERE HANGER NO. 3 IS REQUIRED.

NOTE: ALL BOLTS TO HAVE SQUARE OR HEXAGONAL HEADS. ALL NUTS TO BE SQUARE OR HEXAGONAL. STOVE BOLTS ARE NOT ACCEPTABLE.

HANGER NO. 1				HANGER NO. 2				HANGER NO. 3				HANGER NO. 4			
A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D
1/2	3/8	3/4 x 1/8	3/8	1/2	3/8	3/4 x 1/8	3/8	1/2	1/4	3/4 x 1/8	3/4 x 1/4	1/2	3/8	1 1/8 x 10GA	1 1/8 x 10GA
3/4	3/8	1 x 1/8	3/8	3/4	3/8	3/4 x 1/8	3/8	3/4	1/4	3/4 x 1/8	3/4 x 1/4	3/4	3/8	1 1/8 x 10GA	1 1/8 x 10GA
1	3/8	1 x 1/8	3/8	1	3/8	3/4 x 1/8	3/8	1	1/4	3/4 x 1/8	3/4 x 1/4	1	3/8	1 1/8 x 10GA	1 1/8 x 10GA
1 1/4	3/8	1 x 1/8	3/8	1 1/4	3/8	1 x 1/8	3/8	1 1/4	1/4	1 x 1/8	1 x 1/4	1 1/4	3/8	1 1/4 x 1/8	1 1/4 x 1/8
1 1/2	3/8	1 1/4 x 3/16	3/8	1 1/2	3/8	1 x 1/8	3/8	1 1/2	1/4	1 x 1/8	1 x 1/4	1 1/2	3/8	1 1/4 x 1/8	1 1/4 x 1/8
2	3/8	1 1/4 x 3/16	3/8	2	3/8	1 x 1/8	3/8	2	1/4	1 x 1/8	1 x 1/4	2	3/8	1 1/4 x 3/16	1 1/4 x 1/8
2 1/2	1/2	1 1/4 x 1/4	1/2	2 1/2	1/2	1 x 1/8	3/8	2 1/2	1/4	1 x 1/8	1 x 1/4	2 1/2	1/2	1 1/4 x 3/16	1 1/4 x 1/8
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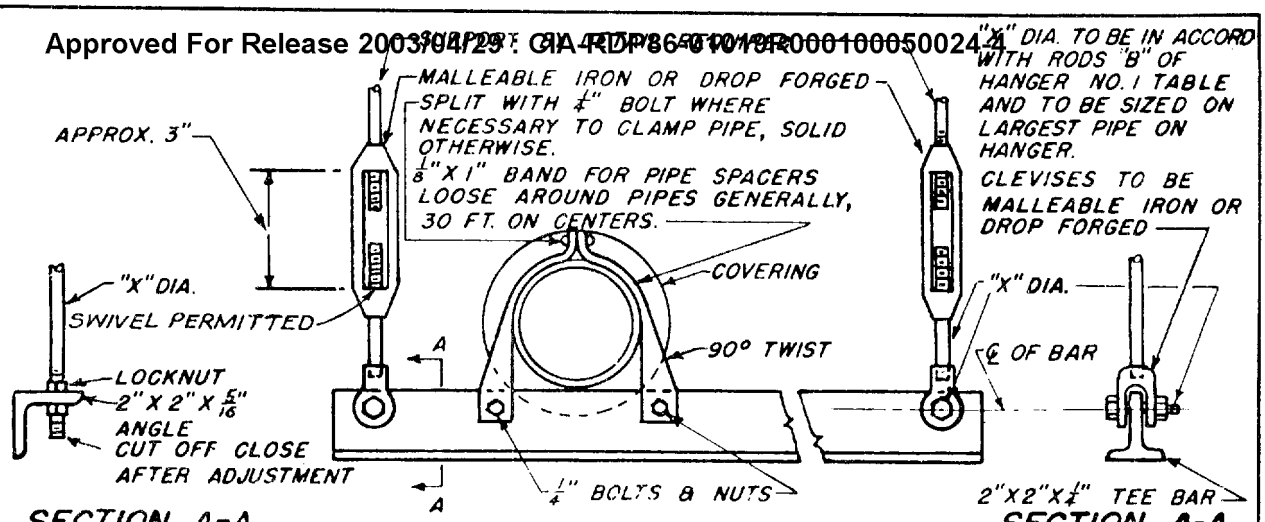
6	3/4	2 x 5/16	3/4	6	5/8	1 1/4 x 3/16	5/8	6	1/2	1 1/2 x 1/8	1 1/2 x 3/8	6	5/8	1 1/2 x 3/8	1 1/2 x 1/4
8	7/8	2 x 3/8	7/8	8	5/8	1 1/4 x 3/16	5/8	8	1/2	1 1/2 x 1/8	1 1/2 x 1/2	8	5/8	2 x 3/8	2 x 1/4
10	1	2 x 1/2	1	10	3/4	1 1/2 x 1/4	3/4	10	5/8	2 x 1/4	2 x 1/2	10	3/4	2 x 1/2	2 x 5/16
12	1	2 x 1/2	1	12	3/4	1 1/2 x 1/4	3/4	12	5/8	2 x 1/4	2 x 1/2	12	3/4	2 x 1/2	2 x 5/16

GSA-WASH DC 51-8815

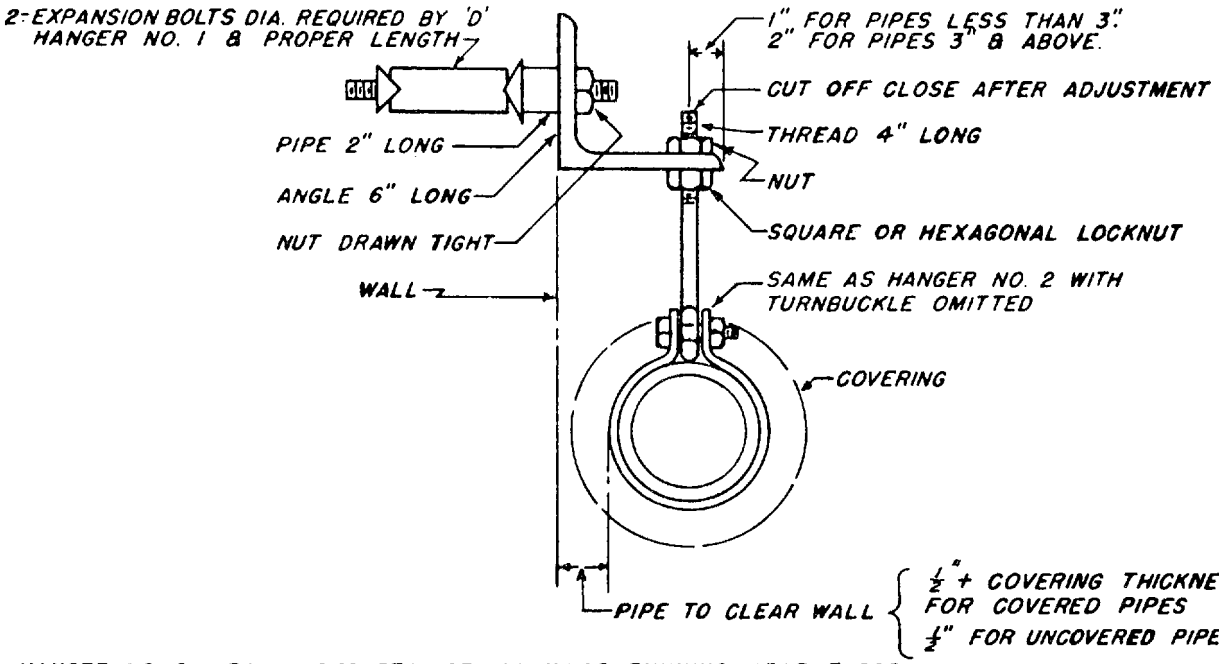
FILE NO.		PIPE HANGERS	SCALE: NONE
DATE	12-7-45		DWG. NO.: 10-1-1A
REVISED	6-15-51		STANDARD DETAIL



EITHER 2"X2"X1/4" TEE BAR WITH TURNBUCKLE OR 2"X2"X5/16" ANGLE WITHOUT TURNBUCKLE MAY BE USED.
FOR ELECTRIC CONDUITS & PLUMBING PIPES NOT MORE THAN FOUR IN NUMBER & LARGEST PIPE NOT OVER 2" A TEE BAR 1 1/2"X1 1/2"X1/4" OR ANGLE 1 1/2"X1 1/2"X1/4" MAY BE USED.

HANGER NO. 5 FOR HOT, COLD, CIRCULATING & ICE WATER LINES, AIR LINES, ELECTRIC CONDUITS, ETC. WHERE THREE OR MORE SUCH RUN PARALLEL AT SAME ELEVATION & GRADE IN SAME DIRECTION. ALL BOLTS TO HAVE SQUARE OR HEXAGONAL HEADS. ALL NUTS TO BE SQUARE OR HEXAGONAL. STOVE BOLTS ARE NOT ACCEPTABLE.

HANGER NO. 5



HANGER NO. 6 FOR PIPES ETC., OF ALL KINDS RUNNING NEAR FLOOR.

HANGER NO. 6

FILE NO.		PIPE HANGERS	SCALE NONE
DATE	12-7-45		DWG. NO. 10-1-2A
REVISED	6-15-51	PUBLIC BUILDINGS SERVICE, GENERAL SERVICES ADMINISTRATION	STANDARD DETAIL

R.S.H. 6-26-51 "AS" T.C.C 6-21-51 "AE" C.D.P 6-18-51 "DS" HMT. 6/12/51 "SP" "S" LRM 6/7/51 "ME"

GSA-WASH DC 51-8815